

# POLICY ON MIXING DIFFERENT NON-EXCEPTIONAL QUALITY BIOSOLIDS—OCTOBER 2008

## ***Introduction***

The Washington State Department of Ecology (Ecology) allows the mixing of non-exceptional quality (non-EQ) biosolids products produced by different sources. However, when this occurs the mixer is viewed as a person who prepares a *material derived from biosolids*. A material derived from biosolids is considered to be a new biosolids product that must meet all applicable quality standards and management requirements in the state biosolids rule (*Chapter 173-308 WAC, Biosolids Management*).

The following provides a brief overview of the regulatory requirements and expectations for mixers of non-EQ biosolids.

## ***Coverage Under the General Permit for Biosolids Management***

Any facility that mixes non-EQ biosolids must have coverage under the *General Permit for Biosolids Management* or an individual permit allowing it to mix. During the permitting process, the permittee must make clear its intention to mix or to maintain the option to mix.

## ***Pollutants***

The mixture must be analyzed to ensure that it meets the allowable concentrations for the pollutants listed in WAC 173-308-160 Table 1.

## ***Pathogen Reduction***

Pathogen reduction must be shown for the mixture. At a minimum the mixture must meet the Class B standard for pathogen reduction. This can be done through one of the process or analysis options defined in WAC 173-308-170. Typically, the “7 samples” analysis option in WAC 173-308-170(5) will be the simplest way to meet the pathogen reduction requirement because processing can be time-consuming and costly.

## ***Vector Attraction Reduction***

The vector attraction reduction requirement must be met for the mixture. This can be done through one of the process or analysis options defined in WAC 173-308-180. Alternatively, the requirement can be met through management via injection or incorporation at the time of application. Typically, injection or incorporation will be the simplest way to meet the vector attraction reduction requirement because processing or analysis can be time-consuming and costly.

## ***Significant Removal of Recognizable Manufactured Inerts***

The mixture must meet the significant removal of manufactured inerts requirement in WAC 173-308-205(1) and (2). If the removal requirement was met by the producers of all the biosolids in the mixture, the mixture will be considered to have met the requirement, and no additional removal will be required. If the requirement was not met by the producers of all the biosolids in the mixture, the mixer must screen in order to meet the removal requirement.

### **Final Product Standard for Recognizable Manufactured Inerts**

The mixture will be required to meet the less than 1% recognizable manufactured inerts final product standard described in WAC 173-308-205(4). If the final product standard has been met by the producers of all the biosolids in the mixture, the mixture will be considered to have met the requirement. Testing to ensure this standard is met will not be required unless Ecology determines there is a need for testing. Ecology has prepared a method for testing the final product. Please contact your regional biosolids coordinator if you would like a copy of this method.

### **Nitrogen**

In order to ensure application at an agronomic rate, the mixture must be tested for nitrogen concentration. Typically, the mixture will need to be tested for total Kjeldahl nitrogen, ammonia/ammonium-nitrogen, and nitrate-nitrogen.

### **Mixing Method**

The method used to mix must be designed to promote the production of a homogenous mixture. There are many options available to achieve this goal. Ecology does not have a preference for any given method; however, as part of the permitting process the mixing facility will be expected to describe its method for mixing.

### **Representative Sampling**

In accordance with WAC 173-308-140(1), all sampling that is conducted must be representative of the biosolids that are applied to the land. Conducting representative sampling can be accomplished in many ways. There are numerous resources available that discuss representative sampling. Sources include: 1) *Guidance on Choosing a Sampling Design for Environmental Data Collection*, EPA/240/R-02/00, December 2002; and 2) *The Wastewater Treatment Plant Operators Guide to Biosolids Sampling Plans*, New England Interstate Water Pollution Control Commission, September 2006.

As part of applying for coverage under the *General Permit for Biosolids Management*, the mixing facility will need to submit an acceptable sampling plan describing how it will conduct sampling to meet the “representative sampling” requirement.

### **Frequency of Sampling**

The mixing facility will be required to sample in accordance with the frequency requirements in WAC 173-308-150. The frequency of sampling is based on the dry weight tonnage of biosolids applied to the land in a given year. The minimum frequency of monitoring applies to pollutants, pathogen reduction, and vector attraction reduction. The minimum frequency of monitoring is:

#### **MINIMUM FREQUENCY OF MONITORING**

<b>U.S. tons per 365-day period</b>	<b>Frequency</b>
1 - 320	once a year
320 – 1,653	once every quarter (4 times a year)
1,653 – 16,535	once every 60 days (6 times a year)
16,535+	once a month (12 times a year)